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PATENT SPECIFICATION

1,059,397

1,059,397



Date of Application and filing Complete
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Int. Cl.:—E 04 c 1/80 // E04h.

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COMPLETE SPECIFICATION

DRAWINGS ATTACHED

A Roof constructed of Prefabricated Elements of Reinforced Concrete and Method for Assembling Same

WE, EDELTRAUD POLONYI of Hohenstaufen-
ering 53, Cologne, Germany, GERTRUD
STEWING of Kirchhellener Allee 13, Dorsten,
Germany, and PAUL STEWING of Garten-
strasse 6, Lembeck near Dorsten, Germany,
all German citizens, do hereby declare the
invention, for which we pray that a patent
may be granted to us, and the method by
which it is to be performed, to be particularly
described in and by the following statement:

Roofs constructed of prefabricated rein-
forced concrete elements are already known
and are often used. A common feature of
such roofs is that they are constructed from
a support means and a roof covering resting
on the support means. Roof constructions
held by a single support and not requiring
additional support means, as from walls, are
also already known in the art as shell-form
roofs or folded roofs, but these are usually
constructed in one piece of cast-in-situ
concrete.

The disadvantages of roof constructions
of this type lie in the capital costs and in
the relatively long time required for con-
struction. If the numerous possibilities for
use of such roofs are, however, taken into
account, e.g. for petrol stations, shelters at
public transport stops, etc. the need of the
building art for roofs supported only by one
or a few supports and made of reinforced
concrete elements which can be constructed
in situ in as short a time as possible at the
lowest possible cost, is immediately apparent.
The invention has for an object to provide
a suitable roof construction of prefabricated
reinforced concrete elements for this purpose.

A roof structure, according to the present
invention, is constructed of sheet-like, pre-
fabricated, reinforced concrete, structural
units which are curved or comprise curved
or plane parts meeting at a fold and are
disposed side by side in a direction normal

to the plane of the curve or parallel to the
fold of each element and are held to one
another by flexible tensioned means passing
transversely through the units in a sinuous
manner with the inward and outward
undulations of each wire extending respec-
tively towards and away from the centre line
of the units and lying substantially within
the breadths of respective units which are
supported by a single support or by a
plurality of spaced supports.

Numerous forms of correspondingly
shaped, prefabricated units may be used to
construct roof structures in accordance with
the invention. A preferred embodiment
which is of special importance because of
its simplicity is that in which the structural
units have a single curve or fold or two
curves on opposite sides of a fold arranged
in a direction perpendicular to the plane of
the bends.

A method of forming a roof structure in
accordance with the invention includes pre-
fabricating a plurality of similar reinforced
concrete, sheet-like units, each with sym-
metrically disposed, transverse bores or
grooves of inwardly or outwardly undulating
form, assembling units side by side with
ends of the bores or grooves of adjacent units
in register and with undulations of the bores
or grooves extending inwardly and outwardly
respectively in adjacent units, threading
flexible means through the bores or grooves
and tensioning the said means to clamp the
units to one another.

Advantageously, in order to adapt the
prefabricated units to as wide a range of
uses as possible, they and the tensioning
means are so calculated that it is possible
to support the resultant assembly of units
by one or more supports with any desired
securing means.

Advantages of the invention lie in the

[Price 4s. 6d.]

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1,059,397 - COMPLETE SPECIFICATION
2 SHEETS This drawing is a reproduction of
the Original on a reduced scale.
SHEETS 1 & 2

Fig. 4

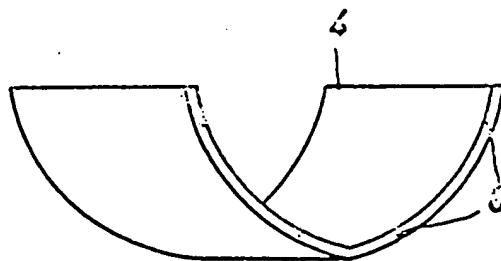
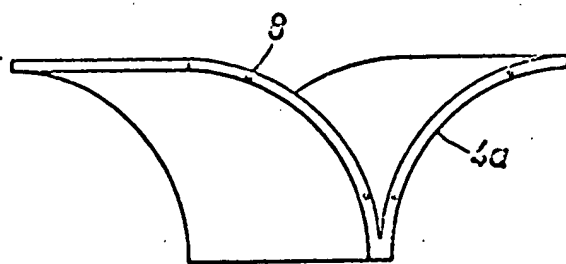
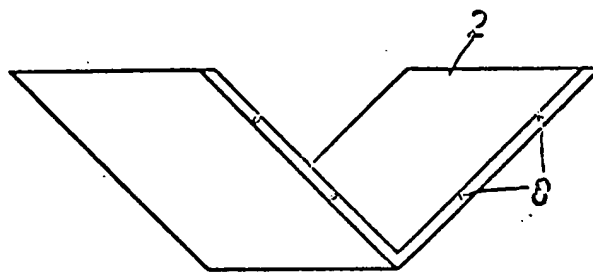
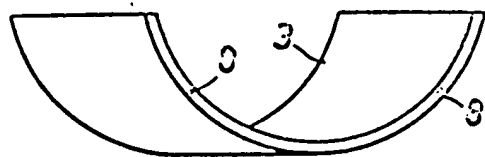


Fig.1

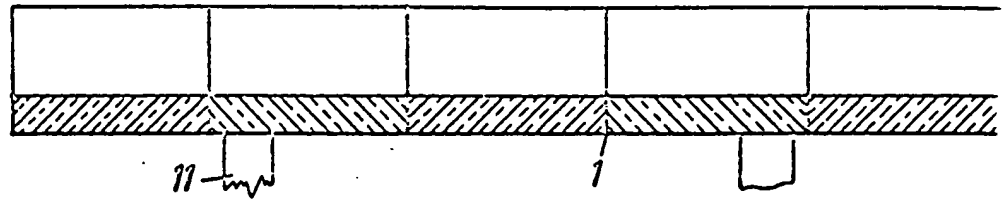


Fig.2

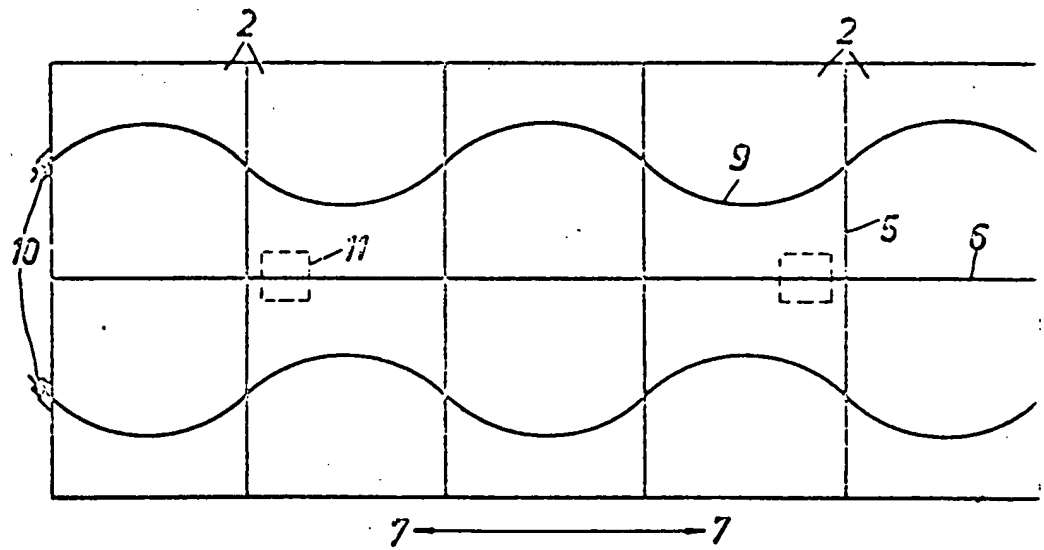


Fig.3

